REMARKS

I. Introduction:

The courteous telephone interview granted applicants' undersigned attorney by Examiner Elizabeth Quan and Examiner's supervisor Jill Warden is hereby respectfully acknowledged.

Claims 1-16, 27-37, and 52-53 are cancelled without prejudice to their patentability and claims 17, 19, 42, and 47 are amended herein. Claims 38-41 have been previously withdrawn from consideration by the Examiner as being directed to a non-elected distinct invention. With entry of this amendment, claims 17-26 and 42-51 will be pending.

II. Claim Rejections:

Claims 17-19, 21-25, 42-47, 49, and 51 stand rejected under 35 U.S.C.§102(b) as being anticipated by U.S. Patent No. 5,324,483 (Cody et al.). Claims 26 and 50 stand rejected under 35 U.S.C.§103(a) as being unpatentable over Cody et al. in view of U.S. Patent No. 6,309,608 (Zhou et al.). Claims 20 and 48 stand rejected under 35 U.S.C.§103(a) as being unpatentable over Cody et al. in view of U.S. Patent No. 5,443,791 (Carthcart et al.).

Claim 17 has been amended to include the limitations of claim 1 and claims 17 and 42 have been amended to specify that the flow restriction device includes a flow passageway formed therein to provide primary flow passages between the reaction wells and the pressure chamber while reducing cross-talk between the reaction wells.

Cody et al. disclose an apparatus for solid phase synthesis. The apparatus includes a reservoir block 15 having a plurality of wells 16, a plurality of reaction tubes 11 with filters 14 on their lower ends, a holder block 18 having a plurality of apertures 19, and a manifold 20 which may include ports 23 to allow

introduction or maintenance of a controlled environment (see Figs. 1 and 3). The reaction wells are in fluid communication with the chamber formed by the manifold through the reaction tubes.

The Examiner identifies gasket 26 of the Cody et al. apparatus as a flow restriction device. Gasket 26 is interposed between the reservoir block 15 and the holder block 18 (Figs. 2, 3, and 5). The gasket 26 does not provide a primary flow passage between the reaction wells and a sealed chamber (i.e., chamber formed by manifold 20). Instead, the reaction tube forms the primary flow passageway. As shown in Fig. 5 and described at col. 9, lines 46-47, gaskets 24 and 26 are used to seal the reaction wells from the chamber. Gasket 26 also seals open ends of the reaction wells 16 from one another. The Examiner states that a slight gap between the gasket 26 and reaction tube 11 allows gas to travel from the pressure chamber into the reaction wells. However, since the gas is generally free to flow between the reaction well and pressure chamber through the reaction tube, there will be little if any fluid communication past the seal.

As noted by Cody et al., the reaction wells should be located throughout the reservoir block such that each reaction well is not in direct contact with any neighboring reaction wells (col. 8, lines 45-48). Cross-talk which takes place between the reaction wells occurs through the open ends of the reaction tubes, and this cross-talk is not reduced by gasket 26.

Accordingly, claims 17 and 42, as amended, are submitted as patentable over the Cody et al. and the other prior art of record.

Claims 18 and 20-26, depending either directly or indirectly from claim 17, and claims 43-46 and 48-51, depending either directly or indirectly from claim 42, are submitted as patentable for the reasons discussed above with respect to claims 17 and 42.

Claims 19 and 47 have been amended to specify that the flow restriction device includes a plurality of flow passageways aligned with the reaction wells

and that each of the flow passageways have a diameter substantially smaller than a diameter of the aligned reaction well. As amended, claims 19 and 47 are submitted as patentable over Cody et al. and the other prior art of record.

With respect to the rejection of claim 26 over Cody et al. and Zhou et al., the Examiner refers to springs 490 as being used to bias vials upward against a flow restriction device. Zhou et al., however, teach away from using springs to bias vials against a flow restriction device. Springs 490 of the Zhou et al. apparatus are used to force seal plate 400 towards the bottom surface of reaction block 100 and not for biasing vials (see, Figs. 1 and 5A-5F, and col. 13, line 66-col. 14, line 2). Glass vials are not used in the reaction block 100, because vials would make it impossible to open the reaction wells and drain or purge the contents, which is an important feature of the Zhou et al. apparatus.

III. Conclusion:

In view of the foregoing, reconsideration and allowance of claims 17-26 and 42-51 are respectfully requested. If the Examiner feels that a telephone conference would in any way expedite prosecution of the application, please do not hesitate to call the undersigned at (408) 446-8695.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE TO THE APPLICATION

In the Claims

Claims 1-16, 27-37, and 52-53 are cancelled without prejudice to their patentability.

Claims 17, 19, 42, and 47 are amended as follows:

17. (Amended) [The apparatus of claim 1 further comprising] An apparatus for use in parallel reaction of materials, comprising:

a base having a plurality of reaction wells formed in an upper surface of the base and extending partially therethrough, each of said reaction wells having a closed lower end defined by the base and an open upper end for receiving components for the reaction;

a cover configured for sealing engagement with the base to form a housing enclosing said plurality of reaction wells and defining a common pressure chamber in communication with said plurality of reaction wells;

an inlet port in communication with said pressure chamber for supplying pressurized fluid to said chamber to pressurize said plurality of reaction wells; and

a flow restriction device positioned adjacent to said open ends of the reaction wells and comprising flow passageways formed therein to provide a primary flow passage between [to provide communication between] the reaction wells and said pressure chamber while reducing cross-talk between the reaction wells;

wherein the housing is configured to sustain a pressure substantially above atmospheric pressure.

19. (Amended) [The apparatus of claim 17 wherein the flow restriction device comprises] An apparatus for use in parallel reaction of materials, comprising:

a base having a plurality of reaction wells formed in an upper surface of the base and extending partially therethrough, each of said reaction wells having a closed lower end defined by the base and an open upper end for receiving components for the reaction;

a cover configured for sealing engagement with the base to form a housing enclosing said plurality of reaction wells and defining a common pressure chamber in communication with said plurality of reaction wells; and

a flow restriction device positioned adjacent to said open ends of the reaction wells to provide communication between the reaction wells and said pressure chamber while reducing cross-talk between the reaction wells, the flow restriction device comprising a plurality of [micromachined] flow passageways formed therein and aligned with said plurality of reaction wells, each of said flow passageways having a diameter substantially smaller than a diameter of the aligned reaction well; and

an inlet port in communication with said pressure chamber for supplying pressurized fluid to said chamber to pressurize said plurality of reaction wells;

wherein the housing is configured to sustain a pressure substantially above atmospheric pressure.

42. (Amended) An apparatus for use in parallel reaction of materials, comprising:

a base having a plurality of reaction wells, each of said reaction wells having a closed lower end and an open upper end for receiving components for the reaction;

a cover configured for sealing engagement with the base to form a housing enclosing said plurality of reaction wells and defining a common pressure chamber in communication with said plurality of reaction wells;

a flow restriction device positioned adjacent to said open ends of the reaction wells and comprising flow passageways formed therein to provide a primary flow passage between [communication between] the reaction wells and said pressure chamber while reducing cross-talk between the reaction wells; and

an inlet port in communication with said pressure chamber for supplying pressurized fluid to said chamber to pressurize said plurality of reaction wells.

47. (Amended) [The apparatus of claim 42 wherein] An apparatus for use in parallel reaction of materials, comprising:

a base having a plurality of reaction wells, each of said reaction wells having a closed lower end and an open upper end for receiving components for the reaction;

a cover configured for sealing engagement with the base to form a housing enclosing said plurality of reaction wells and defining a common pressure chamber in communication with said plurality of reaction wells;

a flow restriction device positioned adjacent to said open ends of the reaction wells communication between the reaction wells and said pressure chamber while reducing cross-talk between the reaction wells; the flow restriction device [comprises] comprising a plurality of [micromachined] flow passageways formed therein and aligned with said plurality of reaction wells, each of said flow passageways having a diameter substantially smaller than a diameter of the aligned reaction well; and

an inlet port in communication with said pressure chamber for supplying pressurized fluid to said chamber to pressurize said plurality of reaction wells.